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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,195	01/11/2002	Kouichi Akabori	040679-1417	4872

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EXAMINER	
NGUYEN, THU V	
ART UNIT	PAPER NUMBER

3661

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/042,195	AKABORI ET AL.
	Examiner Thu Nguyen	Art Unit 3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 11 January 2002 .

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-14 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____ .
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .	6) <input type="checkbox"/> Other: _____ .

Art Unit: 3661

DETAILED ACTION

Specification

1. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are:

- a. In the specification paragraph [0042], [0053], the "fifth control number of times before the present time PF5", "fourth control number of times", etc. are not clear, it is not clear if the "fifth control number of times", etc. imply durations or velocity values.
- b. In the specification paragraph [0043], [0081], the "predetermined distance β during the stop of the host vehicle" is not clear, what is the "during the stop of the host vehicle"?

2. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3661

4. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In claim 1, line 12, the claimed “the velocities” does not seem corresponding with the singular “velocity” in line 8.
- b. In claim 1, lines 12-13, the claimed “one of the velocities of the vehicle and the preceding vehicle” is ambiguous, it is not clear if the claimed velocity is the velocity in lines 8-9, or if the claimed velocity must be different than the one in lines 8-9.
- c. In claim 1, line 23, the claimed “which is used to set the target inter-vehicle distance” is ambiguous, it is not clear the “which” refers to the “velocity”, or if it refers to the “target inter-vehicle distance”.
- d. In claim 2, line 2, the claimed “which is used” is ambiguous, it is not clear if “which” refers to the dead time or if it refers to the “detected velocities”.
- e. In claim 3, line 4, the claimed “as either one of the detected velocities” is ambiguous, since it is not clear if the detected velocity is the same as the detected velocity of either the vehicle or the preceding vehicle in lines 2-3, or if the claimed detected velocity should be the detected velocity of the vehicle other than the detected velocity in lines 2-3.
- f. Claim 4, line 3; claim 6, line 3; claim 7, lines 2-3, the claimed “one of the velocities” is similarly rejected as explained in claim 1, lines 12-13 above.

Art Unit: 3661

- g. In claim 4, line 4; claim 7, line 4, the claimed “whose” is ambiguous, it is not clear if “whose” refers to the “one of the velocities”, or if it implies the “inter-vehicle distance”.
- h. In claim 9, the claimed “when either one of the velocity of the host vehicle or the preceding vehicle “ is ambiguous, could this velocity be the same as the velocity for setting the target inter-vehicle distance in claim 1, lines 10-13? It is not clear what velocity should be used in claim 9. Further, the host vehicle should be corrected to “the vehicle” to maintain consistency with the vehicle in the independent claim; and the “velocity” should be “velocities”.
- i. Claim 10 is ambiguous and is not comprehensible. For example:
 - i. the disclosed “a fifth control number of times”, “fourth control number of times”, etc. are ambiguous, it is not clear if the “fifth control number of time”, etc imply velocity values, or they imply a time duration;
 - ii. the claimed “previously detected velocity” has not been claimed, since the independent claim 1, lines 8-9 just claims “detects a velocity of at least one of the vehicle and the preceding vehicle”, when only one velocity of the host vehicle is detected, the velocity of the preceding vehicle is not detected in claim 1.
 - iii. the disclosed “the delay providing section provides a fifth control number of times previously detected velocity of the preceding vehicle VF5 for the detected velocity of the preceding vehicle VFF used to set the target inter-vehicle distance when a presently detected velocity of the preceding vehicle VF is equal to or lower than

Art Unit: 3661

the first predetermined velocity value" the lengthy sentence is not understandable, the relationship between the VF5, VFF, and VF is not clear.

- iv. other limitations in the claim are similarly not comprehensible.
- j. In claim 11, lines 8, the claimed "a time of stop of the vehicle" is ambiguous. What is the "time of stop of the vehicle"?
- k. Claims 13-14 are similarly rejected as discussed in claim 1 above.
- l. Claims 5, 8, 12 are rejected as being dependent on the rejected base claim.
- m. Due to serious 112, second paragraph problems in the claims, applicant is requested to review and revise all the claims.

Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al (U.S Patent No. 6,044,321) in view of Tamatsu et al (U.S Patent No. 6,317,073).

As per claim 1, 13-14, Nakamura teaches a cruise control system including an inter-vehicle detecting section, a vehicular velocity detection section, a target inter-vehicle setting

Art Unit: 3661

section, a vehicular traveling speed controlling section (col.17, lines 13-67). Nakamura does not teach a delay providing section. However, Nakamura teaches delaying deceleration, acceleration when the distance is not within collision threshold (col.22, lines 44-67; col.32, lines 37-62), and Tamatsu teaches a delay providing section (col.17, lines 58-67; col.18, lines 1-3). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the delay providing section of Tamatsu to the cruise control system of Nakamura in order to eliminate the noise from the signal.

As per claim 2-7, 9-10, 12, Nakamura teaches providing the dead time for the velocities of the vehicle (col.32, lines 37-43). Further, according to claim 3, 6-7, 9-10, adjusting the duration of the dead time to suit a particular application requires only routines skill in the art.

As per claim 8, Nakamura teaches determining the velocity of the preceding vehicle (col.20, lines 53-61; col.29, lines 41-47).

As per claim 11, Nakamura teaches determining the inter-vehicle distance (col.16, lines 58-67; col.17, lines 1-67).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Art Unit: 3661

Washington, D.C. 20231

or faxed to:

(703) 305-7687, (for formal communications intended for entry)

Or:

(703) 305-7687 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal Drive,
Arlington, VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner
should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner
can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for
this Group is (703)305-7687 .

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Group receptionist whose telephone number is (703)308-1111.



Thu Nguyen

April 11, 2003